Single Wall Carbon Nanotubes Large Scale Production: Bridged the Gap From Lab Potential to Commercial Reality

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Carbon nanomaterials, studied by thousands of researchers and companies around the world, continue to hold the promise to usher in a new era of materials technology. The use of SWCNTs could open the door to fundamental change in many industries, but there has always been an invincible obstacle: SWCNTs were only available in small quantities at sky-high prices, and quality wasn't guaranteed.

In 2014 OCSiAl, an international technology firm headquartered in Luxembourg, unveiled a breakthrough technology for the production of single wall carbon nanotubes ('SWCNTs'), which enables large scale, commercial production of SWCNT for the first time. The output, 'as produced,' under the brand name TUBALL, yields 75% and more of top quality SWCNTs, with all impurities of catalyst particles encapsulated in carbon shells. The content of free metal particles does not exceed 1%. Numerous laboratory and industrial tests proved TUBALL's ability to serve as a first universal additive, enhancing mechanical strength and the thermal and electrical conductivity of materials, such as composites, polymers, rubbers, metals, batteries, transparent conductive films and many others. Significant improvements in performance of these and other materials are observed upon the addition of 0.001%-0.1% weight of TUBALL. The commercial price for TUBALL is 50 times lower than of other products with similar properties. Potential annual capacity of OCSiAl production is currently 10 tonnes. This method is easily scalable and capable of producing an unlimited quantity of SWCNTs at a very low cost.

With this production volume and ultimately the quality of the end product, OCSiAl technology is poised to improve many of the products the world relies on. OCSiAl helps make nanotechnology applicable for many companies desperate for a commercially viable materials innovation.